

Freud, G. Über das Randwertproblem dritter Art der  
Potentialtheorie. Magyar Tud Akad. Akadémiai Mat.  
Int. Közl. 3 (1954), 223-238 (1955). (Hungarian,  
Russian and German summaries)

The author gives an explicit formula for the Green's  
function of the Laplace equation with respect to the third  
boundary value problem  $T' + dT/dn = 0$ , in case of the half  
plane and half-space. With this he solves the third  
boundary value problem of the Laplace equation in  
domains.

I. H. E. (New York, N.Y.)

FREUD, G.; BOGNAR, J.

FREUD, G.; BOGNAR, J. Calculation of the quantified energy levels of a dipole rotator in an electric field. p. 239.

Vol. 3, No. 2/1, 1954 (published 1955).

KOZLEMENYEI.

SCIENCE

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620014-0

H U N G .

Freed, Géza. On a theorem of Paul Erdős and Paul Turán.  
Magyar Tud. Akad. Mat. Fü. Okt. Kör. 4, 209-217  
(1954). (Hungarian)

Hungarian version of a previous paper of the author  
[Acta Math. Acad. Sci. Hungar. 4, 255-266 (1953); MR  
15, 620].

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620014-0"

"Convergence of the Hermite-Fejér interpolation processes,"  
Acta Mathematica, Budapest, Vol 3, No 1/2, 1954, p. 109

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

✓ Freud, G. Restglied eines Tauberschen Satzes. III.

Acta Math Acad Sci Hungar 5 (1954) 271-289

For parts I, II see notes A 19, 20

J. Math. Anal. Appl. 14 (1966) 107-116

See also note A 21

See also note A 22

Lambert's hypergeometric function

over each finite interval  $\mathcal{G}$  given by

$$F(s) = \int_s^{\infty} e^{-xt} R(x) dx$$

exist when  $s > 0$ . Let, as  $s \rightarrow 0+$

$$F(s) = A + t(R(s))$$

where  $R'(s)$  is increasing over  $\mathcal{G}$ . Then

$R(s) < e^{R(s)}$  when  $s > 0$  and  $R(s) > e^{R(s)}$  when  $s < 0$ .

Let  $C$  be a positive constant such that  $A < C$

constant such that  $A < C$

Fréud, 6.

$$\int_0^{\infty} e^{-ut} d\beta_k(t) = \frac{1}{s} [1 + O(R(s))]$$

and the function  $\gamma_k(t)$  defined by

$$\gamma_k(t) = L\beta_k(t) + \int_0^t u d\gamma_k(u)$$

is a monotone increasing function of  $t$ . Then, for each  $m=0, 1, 2, \dots$

$$\int_0^x (x-t)^m d\gamma_k(t) = A \frac{x^m}{m!} \left[ 1 + O\left(\left(\log \frac{1}{k} \right)^{-m-1}\right) \right]$$

as  $x \rightarrow \infty$ . Related theorems and applications to Dirichlet series and power series are given. R. P. Agnew

FREUD, G.

Freud, G. Über orthogonale Polynome. Acad. Math. Acad. Sci. Hungar. 5, 291-293 (1954). (Russian summary)

L -> F/W

The  $p_n(x)$  are the orthonormal polynomials with respect to a non-negative weight function  $w(x)$  in  $(-1, 1)$ . In an earlier paper [Sains Acta 3, 83-88 (1952); MR 14, 467] the author proved that the corresponding Fourier series of an  $f \in L^2$  (with respect to  $w$ ) is strongly  $(C, 1)$ -summable at almost all points  $x$  where  $(*) \sum_{n=1}^{\infty} p_n^2(x) = O(n)$ . Earlier results point to the (improved) conjecture that  $(*)$  holds for almost all  $x$  where  $w(x) > 0$ . In this direction it is now proved: I. Let  $W(\vartheta) = w(\cos \vartheta) \sin \vartheta$  in  $(0, \pi)$ , and 0 otherwise. If, for small  $h$ ,

$$\int_0^\pi \frac{|W(\vartheta+h) - W(\vartheta)|}{W(\vartheta)} d\vartheta = O\left(\log \frac{1}{|h|}\right), \quad (a > 1),$$

then  $(*)$  holds almost everywhere. II. At almost all zeros of  $w$  one has  $\pi^{-1} \sum_{n=1}^{\infty} p_n^2(x) \rightarrow \infty$ . W.W. Radosinski.

Freud, Céza. On orthogonal polynomials. Magyar Tud. Akad. Mat. Fiz. Oszt. Közl. 5, 21-27 (1955). (Hungarian)

Hungarian version of the paper reviewed above.

Freud, G. Über das gliedweise Differenzierten einer orthogonalen Polynomreihe. Acta Math. Acad. Sci. Hungar. 6 (1955), 221-226. (Russian summary)

Let  $p_n(x)$  be the orthonormal polynomials of degree  $n$  with respect to the non negative weight function  $w(x) \in L^1$  in  $(-1, 1)$ . The following theorem is proved: Suppose that  $w(x) \geq m > 0$  in  $(a, b)$  where  $-1 < a < b < 1$ . Let  $f$  have  $k$  continuous derivatives in  $(-1, 1)$  and  $L^1$  mod of  $f^{(k)}$ , the modulus of continuity for  $f^{(k)}$ . If  $\sum_{n=1}^{\infty} n^{-k} O(1/n) f^{(k)}(n) < \infty$ , then the  $k$ -times differentiated Fourier series of  $f$  (with respect to the  $p_n$ ) is absolutely convergent uniformly in every closed subinterval of  $(a, b)$ , and its sum is  $f^{(k)}$ . A second theorem of a similar kind is also proved.

W. W. Rogosinski (Newcastle-upon-Tyne)

P.W.R.

FREUD, G.

Differentiation of interpolated Lagrange sequences. In German. p. 467.  
Vol. 6, no. 3/4, 1955

so. EAST EUROPEAN ACCESSIONS LIST Vol. 5, no. 7, July 1956

FRIED, G.

H U N G .

637.311.62

1934

Current Distribution in Cylindrical Conductors  
of Circular Cross-Section. L. Stein. (Acta Tech.  
Acad. Sci. Hungaricae, 1935, Volume 4, pp. 397-  
408. In German.) A calculation is made of the current  
distribution and Joule heating for the conductor in a  
uniform alternating magnetic field.

FREUD, G.

FREUD, G. - Kozlemenyei - Vol. 5, no. 1, 1955.

Convergence of the Hermite-Fejer interpolation method. p. 29.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, no. 9, Sept. 1955  
Uncl.

FREUD, G.

FREUD, G. - Kozlemenyei - Vol. 5, no. 1, 1955.

Absolute convergence of orthogonal polynomial series. p. 49.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955  
Uncl.

FREUD, GREZA

Freud, Géza. Über einsellige Approximation durch Poissonlinien. I. Acta Sci. Math. Szeged 16, 12-23 (1955).

The following theorem on approximations is proved.

Let  $f(x)$ ,  $-1 \leq x \leq 1$ , be differentiable  $v - M$ -times and let  $\int_{-1}^1 f(x) dx = 0$ . Then there exists a point  $x_0$  in  $(-1, 1)$  such that

$$\left| \int_{-1}^1 f(x) e^{ixt} dx - t^v A_v \right| < A,$$

Here  $A_v$  depends only on  $v$ . This result is used in order to estimate the error (1) in certain mechanical quadrature formulas. It is shown that (2) is a Tauberian formula for the corresponding transforms.

SUBJECT USSR/MATHEMATICS/Theory of approximations CARD 1/2 PG - 55  
 AUTHOR FREUD G.  
 TITLE One-sided  $L_1$ -approximations and their application to theorems  
       of Tauber's type.  
 PERIODICAL Doklady Akad. Nauk 102, 689-691 (1955)  
       reviewed 6/1956

The author proves the theorem: If  $f(x)$  is  $m-1$  times differentiable on  $(a, b)$ ,  
 then there exist polynomials of  $n$ -th degree  $p_n(x)$  and  $P_n(x)$  which satisfy the  
 following conditions:

$$p_n(x) \leq f(x) \leq P_n(x) \quad a \leq x \leq b$$

$$\int_a^b [P_n(x) - p_n(x)] \frac{dx}{\sqrt{(b-x)(x-a)}} = 0 \left( \frac{1}{n^{m+1}} \right).$$

For the proof the classical polynomials of Markov and Stieltjes and the  
 Chebyshev's quadrature in terms of abscissas is used. From results of Bern-  
 stejn the author concludes without proof (with a hint to Karamat's proof  
 of the Littlewood's theorem) the second theorem: Let  $F(t)$  be not decreasing  
 and defined on  $(0, \infty)$  and let the Laplace-Stieltjes transformation

Doklady Akad. Nauk 102, 689-691 (1955)

CARD 2/2 PG - 55

$$F(s) = A \frac{\Gamma(\alpha+1)}{s^\alpha} [1 + O\{R(s)\}]$$

converge for  $\operatorname{Re} s > 0$ . Let be  $\alpha \geq \frac{1}{2}$ . If  $s$  tends to zero (remaining real), then

$$F(s) = A \frac{\Gamma(\alpha+1)}{s^\alpha} [1 + O\{R(s)\}].$$

Here  $R(s)$  is a monotonely decreasing function,  $R(0) = 0$  and

$$R(k_s) < e^{c_3 k} R(s) \quad k=2,3,\dots.$$

Then the function  $f$  being  $m-1$  times differentiable on  $(0,1)$  satisfies the condition

$$\int_0^\infty f(e^{-\frac{t}{x}}) \cdot e^{-\frac{t}{x}} dF(t) = Ax^\alpha \left[ \int_0^1 (\log \frac{1}{y})^{m-1} f(x) dx + O\left\{ \left[ \log \frac{1}{R(1/x)} \right]^{-m-1} \right\} \right].$$

INSTITUTION: Inst.of applied Math. of the Acad. of Sciences of Hungary, Budapest.

HUNGARY/Atomic and Molecular Physics - Heat

D-6

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5460

Author : Adler Gyorgy, Freud Geza

Inst : -

Title : On the Principle of Maximum for the Differential Equation of Heat Conduction. I.

Orig Pub : Magyar tud. akad. Mat. kutato int. kozl., 1956, 1, No 1-2,  
157-165

Abstract : The authors consider a case in which part of the boundary of the body that conducts the heat, is thermally insulated. It is proven that the maximum (or minimum) of the temperature cannot be reached on the insulated portion of the boundary, with the exception, perhaps, of the initial instant of time.

Card : 1/1

24

Freud, G.; und Králik, D. Über die Anwendbarkeit des Dirichletschen Prinzips für den Kreis. [Hungarian summary]  
Acta Sci. Hungar. 7 (1950), 411-412. (Hungarian summary)

This paper contains a discussion of the relation to each other of certain previously known conditions for the applicability of Dirichlet's principle to the solution of the Dirichlet problem for the circle. Some refinements of these conditions involved is that due to R. Courant, in terms of the Fourier coefficients of the boundary value function [Dirichlet's principle, conformal mapping and minimal surfaces. Interscience, New York, 1950; MR 11, 90]. Other results cited include those due to S. M. Nikol'skii [Mat. Sb. N.S. 35(77) (1954), 247-266; MR 16, 589], and L. N. Slobodeckij and V. M. Babić [Dokl. Akad. Nauk SSSR (N.S.) 106 (1956), 604-606; MR 17, 959].

F. W. Perkins (Hanover, N.H.)

FREUD, G.

Displacement current generating in a circular cross-section conductor. P. 7 KOZLEMENYEI Budapest, Vol. 18, no. 1/4, 1956

SOURCE: East European Accessions List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956

5341:

I-FW

2

Freud, Géza. Eine Eigenschaft der Lösungen parabolischer Differentialgleichungen. C. R. Acad. Bulgare Sci. 10 (1957), 451-452. (Russian summary)

Let  $u(x, t)$  for  $0 < t \leq T$ ,  $0 < x < l$  be a solution of the parabolic differential equation

$$\frac{\partial^2 u}{\partial x^2} + c(x, t) \frac{\partial u}{\partial x} = a(x, t) \frac{\partial u}{\partial t},$$

where  $a(x, t)$  is a positive function and  $u(x, t)$  is continuous in the closed region  $0 \leq t \leq T$ ,  $0 \leq x \leq l$ . The author establishes the following theorem:

Let  $u(x, 0)$ ,  $0 \leq x \leq l$  and  $u(t, l)$ ,  $0 \leq t \leq T$ , be monotone non-decreasing and let  $u(t, 0)$ ,  $0 \leq t \leq T$  be monotone non-increasing. Then  $u(x, t)$ , for arbitrary  $t$ ,  $0 < t < T$ , is a monotone non-decreasing function of  $x$ .

From the author's summary

FREUD, G.

Remark on the theorems of Cantor and Bendixson. In German. p. 333.

ACTA MATHEMATICA. (Magyar Tudomanyos Akademia) Budapest, Hungary. Vol. 9,  
no. 3/4, 1958.

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

FREUD, G.

Remark on the convergence of an interpolation process of P. Turan. In  
German. p. 337.

ACTA MATHEMATICA. (Magyar Tudomanyos Akademia) Budapest, Hungary. Vol. 9,  
no. 3/4, 1958.

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, no. 1, Jan. 1960.  
Uncl.

ADLER, G.; FREUD, G.

Application of Mikusinski's calculations in the solution of an equation  
in partial derivation. Mat kut kozl MTA 4 no.3/4:367-375 '59.

(EEAI 9:9)

(Differential equations)

FREUD, Geza

Contribution to the positive Zygmund's series of approximation.  
Mat kut kezle MTA 6 no.1/2:71-75 '61.

(Series) (Approximate computation)

S/044/62/000/010/003/042  
B112/B102

AUTHOR: Freud, G., Sallay, M.

TITLE: Rate of convergence of expansion with respect to Sturm-Liouville eigenfunctions

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1962, 37, abstract-  
10B158 (Magyar tud. akad. Mat. kutató int. közl., v. 6, no. 3,  
1961, 271 - 279 [French; summary in Rus.])

TEXT: Let  $v_n(x)$  be the standard eigenfunctions of the differential equation  $y'' + [\lambda - q(x)] y = 0$ , which satisfy the conditions

$$\begin{aligned} \alpha_1 y(0) + \beta_1 y'(0) &= 0, \\ \alpha_2 y(\pi) + \beta_2 y'(\pi) &= 0, \end{aligned} \quad (1)$$

$$s_n(x, f) = \sum_{k=0}^n a_k v_k(x), \quad a_k = \int_0^\pi f(x) v_k(x) dx.$$

Card 1/2

FREUD, Geza, a matematikai tudomanyok doktora

Gyorgy Alexits' Convergence Problems of Orthogonal Series; a book  
review. Mat kozl MTA 11 no.1:121-124 '61. (EEAI 10:6)  
(Alexits, Gyorgy) (Convergence) (Series)

FREUD, G.

On the (C,1)-sums expanded according to orthogonal polynomials.  
Acta mat Hung 14 no.1/2:197-208 '63.

l. Mathematisches Forschungsinstitut der Ungarischen Akademie  
der Wissenschaften, Budapest. Vorgelegt von Gyorgy Alexits.

FREUD,G. (Budapest); KNAPOWSKI,S. (Poznan)

On linear processes of approximation, Pt.1. Studia math 23  
no.2:105-112 '63.

FREUD, Geza

Approximation theorems of M.H. Stone. Mat lapok 15 no.1/3:  
169-178 '64

FREUD, Géza

Contribution to the equivalence in the solution of the  
Hamburger-Stieltjes moment problems. Mat kut kozl MTA  
9 Series A no.1/2:117-123 '64.

1. Editorial Board Member, "A Magyar Tudomanyos Akademia  
Matematikai Kutato Intezetnek Kozlemenyesi."

FREUD, G. (Budapest); KNAPOWSKI, S. (Poznan)

On linear processes of approximation. Pt.2. Studia math  
25 no.2:251-263 '65.

1. Submitted May 25, 1964.

*FREUD, K.*

PHASE I BOOK EXPLOITATION SOV/5975

International Institute of Welding

XII kongress Mezhdunarodnogo instituta svarki, 29 iyunya - 5 iyulya 1959 v.g.  
Opatija (Twelfth Annual Assembly of the International Institute of Welding,  
Opatija, June 29 - July 5, 1959) Moscow, Mashgiz, 1961. 359 p. 3000  
copies printed.

Sponsoring Agency: Natsional'nyy komitet SSSR po svarke.

Ed. (Title page): G. A. Maslov, Docent; Translated from English, French,  
and Serbo-Croatian by N. S. Aborenkova, K. N. Belyayev, E. P. Bogacheva,  
L. A. Borisova, K. V. Zvegintseva, V. S. Minavichev, and M. M. Shelechnik;  
Managing Ed. for Literature on the Hot-Working of Metals: S. Ya. Golovin,  
Engineer.

PURPOSE: This collection of articles is intended for welding specialists and  
the technical personnel of various production and repair shops.

Card 1//

27  
Twelfth Annual Assembly (Cont.)

SOV/5975

COVERAGE: The collection contains abridged reports presented and discussed at the Twelfth Annual Assembly of the International Institute of Welding. Reports deal with problems of welding and related processes used in repair work, repair techniques, and the problems arising in connection with the nature of the base and filler materials. Examples of repairing various parts are given, and the organization of repair operations in workshops and under field conditions is discussed. Economic aspects of welding and related processes as used in repair work are analyzed. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:[Only Soviet and Soviet-bloc reports are given here]

Foreword 5

PART I. THE STUDY OF REPAIR-WORK TECHNIQUES  
(PROCESSES, METHODS, PREPARATION, HEATING, AND  
OTHER TYPES OF PROCESSING CONTROL)

Myuntner, L. (Czechoslovakia). Welding of Broken Crankshafts 36

Card 2/0

Twelfth Annual Assembly (Cont.)

SOV/3975

Khel'bich, R. (Czechoslovakia). Repairing High-Pressure  
Reactors and Regenerators by Welding

297

Mokanu, R., I. Antonesku, and K. Freud (Rumania). Examples  
of Welding Jobs Involved in the Repair Work at Rumanian Railroads

311

PART IV. ORGANIZATION OF REPAIR AND MAINTENANCE OF  
EQUIPMENT AND METAL STRUCTURES AT WORKSHOPS AND UNDER  
FIELD CONDITIONS AS CARRIED OUT IN VARIOUS BRANCHES OF INDUSTRY

[Part IV contains no Soviet or Soviet-bloc reports]

PART V. ECONOMIC ASPECTS OF USING WELDING AND RELATED  
PROCESSES IN REPAIR WORK

[Part V contains no Soviet or Soviet-bloc reports]

Card 6 / 9

167450

S/264/62/000/009/001/006  
I007/I207

AUTHOR: Freudenthal, A.M.

TITLE: Reliability analysis of fatigue-sensitive structures

PERIODICAL: Referativnyy zhurnal, vozdushnyy transport, svodnyy  
tom, no.9, 1962, 7-8, abstract 9A37 (Acta techn.  
Acad. scient. hung.), 1961, 35-36; 55-81 [English] //

TEXT: The problem studied is the operational reliability of aircraft structures from the point of view of static and fatigue strength. Until recently, these two conditions were considered separately which however is unpractical since, when aloft, aircraft structures are subject to static failure as a result of cyclic stresses and loads affecting their static strength. Typical stress patterns are plotted under normal

Card 1/5

S/264 62/000/009/001/006  
I007/I207

Reliability analysis...

operation conditions; these patterns are used for checking the fatigue strength. On the other hand, the stress pattern under unfavorable operation conditions are used for selecting the rated statical loads. The following factors affecting the endurance limit of structures, are considered: stress pattern; characteristics of fatigue strength of the materials involved; peculiarities of materials, structural elements and joints; the influence of residual stresses, of fretting and corrosion; temperature and environmental factors etc. The following ratio is assumed as the basic strength characteristics  $r_f(N)/r_u(N)$  where  $r_f(N)$  = probability of fatigue failure of structures under the action of N load cycles;  $r_u(N)$  = probability of static failure under same conditions: Assuming  $N = N^*$ , where  $N^*$  = number of repeated load

Card 2/5

S3264/62/000/009/001/006  
I007/I207

Reliability analysis ....

cycles, corresponding to the rated fatigue strength (endurance limit) of the structures, it follows that  $f(N^*) = f^*$ . In dependence on the value of  $f^*$ , aircraft structures may be divided into four groups: a). fatigue-insensitive with  $0 < f^* \leq 0.1$  — ; b). moderately fatigue-sensitive with  $0.1 < f^* \leq 1.0$  — ; c). very fatigue-sensitive with  $1.0 < f^* \leq 10$  — ; d). extremely fatigue-sensitive with  $10 < f^*$ . Structures of the first group should preferably be tested for static strength only. Structures of the second group should be designed for fatigue strength. Field tests of such structures should be carried out for static loads, while their component elements and joints should also be tested for cyclic (repeated) loads with an amplitude equal to the value of maximum static operational load (in order to reduce test duration). Structures of the third group should be designed and tested for cyclic loads; at

Card 3 /5

S/264/62/000/009/001/006

I007/I207

Reliability analysis....

least one full-scale structure (of this group) should be subject to typical cyclic loads test; fatigue-resistance tests of structural elements and joints should furnish data permitting the minimum service-life of such structures to be calculated. Structures of the fourth group, if there is no possibility that may be dispensed with, should be designed and tested for cyclic loads only; a sufficient number of full-scale structures of this group should be tested to obtain reliable values of the average endurance limit and characteristics of stray test results. Methods are described for determining  $f^+$ , and a relationship is established between the value of  $f^+$  and the safety factor with respect to the reliable fatigue strength, the maximum operational load, and the amplitude of cyclic loads at which tests are carried out. A graph is plotted for determining the root mean-square deviation of the logarithm of

Case 4/5

S/264/62/000/009/001/006  
I007/I207

Reliability analysis....

average value of dangerous-cycle number; this graph is plotted from the results of fatigue tests with constant amplitude of load stresses, the result of programmed fatigue tests and of tests with random alternating stresses. The method suggested may be used for the qualitative evaluation of operational reliability of various aircraft structures, rather than for any quantitative calculations.

[Abstracter's note: Complete translation.]

Card 5/5

PALI, M.; VAVCS, E.

KREUD, I.; VAVCS, E. Microviscometer. p. 11.

Vol. 11, No. 1, Jan. 1956.

MACYAR KEMIKUSOK TATJA.

TECHNOLOGY

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

L 59573-65 EMT(1)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) IJP(c) JD/GG

ACCESSION NR: AT5009438

CZ/0010/64/000/000/0066/0070

AUTHOR: Makiej, B.; Freud, R.; Sulkowski, C.

TITLE: Change in magnetic induction distribution with temperature in a cylindrical specimen at destruction of superconductivity by current

SOURCE: Conference on Low Temperature Physics and Techniques. 3d, Prague, 1963. Physics and techniques of low temperatures; proceedings of the conference. Prague, Publ. House of the Czechoslovak Academy of Sciences, 1964, 66-10

TOPIC TAGS: superconductivity, magnetic induction distribution, superconductivity destruction, low temperature research, superconducting transition

ABSTRACT: This is a sequel of an investigation by one of the authors (Makiej, ZhETF v. 34 (1958) 312) and is aimed at a closer examination of the inconsistency between the earlier experimental data and the London theory of destruction of superconductivity by a current. To this end, the distribution of magnetic induction was determined in a specimen at fixed current of 25.8 A and at several specimen temperatures. The experimental set-up was the same as described in the earlier paper. The specimen was a polycrystalline tin cylinder 4 mm in diameter, of resistivity ratio  $R_{4.2}/R_{20} = 1.56 \times 10^{-4}$  with a  $0.2 \times 3.5$  mm rectangular slot cut in the central part of the cylinder, symmetrical about the diametral plane. The magnetic

Card 1/2

L 59573-65

ACCESSION NR: AT5009438

8

field in the slot was measured with a magnetoresistance bismuth probe. Comparison of the measurements with the calculations based on London's theory shows that an increase in temperature is accompanied by a decrease in the radius of the "core" of the intermediate state, and the experimental points in the "sheath-core" border region do not lie on the theoretical curve. This discrepancy cannot result from the difference between the temperature of the sample and that of the surrounding helium bath. It is therefore concluded that there is no sharp border between the regions of the intermediate and normal state, and any phenomenological theory ignoring the actual structure of the intermediate state does not describe well the mechanism of destruction of superconductivity by current. "The authors thank Doctor E. Rojnar and Doctor J. Szymaszek for helpful discussions, Doctor W. Giriak for supplying the zonally purified tin, and to Mr. J. Kasprzak and Mr. M. Wasilewski for technical assistance." (Orig. art. has: 6 figures and 2 formulas.)

7

ASSOCIATION: Department of Low Temperatures, Institute of Physics, Polish Academy of Sciences, Wroclaw, Poland

SUBMITTED: 0000054

ENCL: 00

SUB CODE: E4, TD

NR REF Sov: 003

OTHER: 001

Card 2/2

FREUND, I.L. (Chekhoslovakia)

Cages made by various materials for laboratory mice. Lab. delo 6  
no.5:55-57 S-0 '60. (MIRA 13:9)

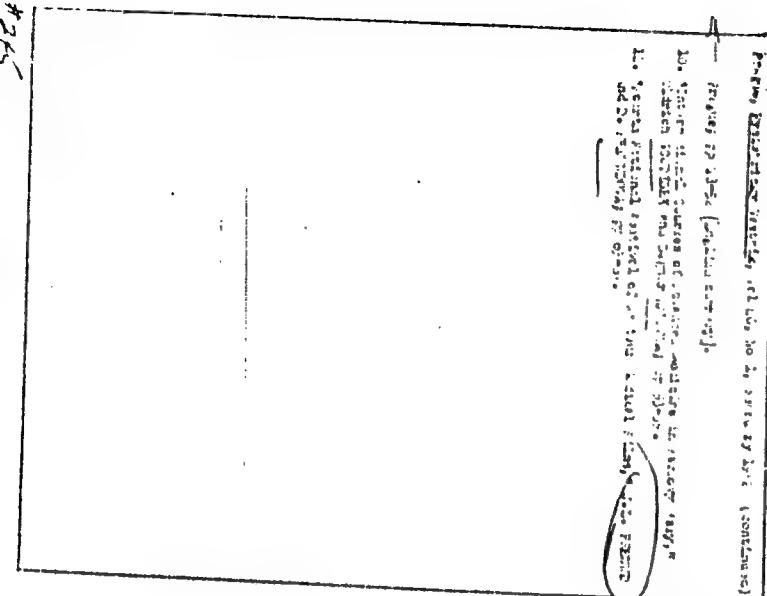
(LABORATORY ANIMALS)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620014-0

FREUND, JL.

- 2 -



5

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620014-0"

FREUND, J.L.; HOUSKA, F.

Report on the Second Czechoslovak Work Conference on Experimental  
Animals. Term tud kozl 5 no.2:91-92 F '61.

FREUD, I.L.; FREUNDOVA, D. (Praga)

"Rat and mouse - experimental animals for research" by E.Hagemann  
and G.Schmidt. Reviewed by I.L.Freund and D.Freundova. Lab. delo  
7 no.12:51 D '61. (MIRA 14:11)  
(LABORATORY ANIMALS) (HAGEMANN, E.) (SCHMIDT, G.)

FREUND - J. L.

2050

— 22 —

11. "Review, Technology, Vol. 40, No. 4, April 62.  
Meeting of the Slovak Branch of the Prehistoric Section  
of the Hungarian Archaeological Society, Piešťany  
on 20 and 21 October 1961. Ján Nárožník and Božka  
Hájová, pp. 121-122.
12. "Death of A. Zweig," TECHNICALITY,  
p. 125.
13. International Symposium on "The Uses of Ultrasonics",  
ZAGREB, p. 127.
14. "Search National Festival of American Motion Pictures",  
Havelock Estate Art Fund, 1961, Hawthorn House Co.,  
PALMCOVIA pp. 127-128.

(b)(1)

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FREUND, K.; SRNEC, J.

Experience with male homosexuality; analysis of changes in sexual  
appetence in experimental. Sborn. lek. 55 no.5-6 125-182 May 1953.  
(CIML 25:1)

1. Experimental therapy with conditioned reflexes.

EXCERPTA MEDICA Sec 8 Vol 9/8 Neurology Aug 56

3592 EREUND K. and SRNEC J. Psychiat. Klin. Karlovy Univ., Praha. "K problematic poruchy paměti způsobené elektrošoků. On the problem of memory disturbance due to electroshocks NEUROL. PSYCHIAT. ČSL. 1955, 18/1 (19-25) Tables 3  
ECT mainly disturbs the registration ability and thus causes Korsakov's amnesia  
Hadík - Olomouc."

EXCERPTA MEDICA Sec 8 Vol 9/9 Neurology Sept '56

3975. FREUND K. and SRNEC J. Psychiat. Klin., Karls-Univ., Prag. "Zum Problem der allgemeinen Merkschwäche, ein Modellversuch. The problem of general weakness of memory; a model." MSCHR. PSYCHIAT.

NEUROL. 1956, 131/4 (226-247) Tables 6 Illus. 5  
The question of the relationship of weakness of memory with 'passivity', 'inhibition' and 'apathy' in any given patient, can be answered so far as such a relationship does exist, and that weakness of memory does depend, at least in part, on lack of spontaneity in reproduction, which is shown by the patient with psychomotor inhibition. The relationship is, however, of too lowly an order for a general weakness of memory to be ascribed wholly or principally to the 'passivity' or the 'apathy' of the subject.

Authors' summary

FREUND, Kurt

Diagnosis of male homosexuality. Cesk. Psychiat. 53 no. 6; 382-394 Dec 57.

1. Psychiatricka klinika MU v Praze.

(HOMOSEKUALITY, diag.  
in males (Cz))

FREUND, K.; DIAMANT, J.; PINKAVA, V.

On the validity & reliability of the phalloplethysmographic (Ppp) diagnosis  
of some sexual deviations. Rev. Czech. M. 4 no.2:145-151 1958.

1. Clinic of Psychiatry Charles' University, Prague. Acting Director:  
Prof. V. Vondracek.

(SEXUAL DEVIATIONS, diag.  
penile plethysmography, diag. value)

(PLETHYSMOGRAPHY, in various dis.  
penile in sexual deviations, diag. value)

(PENES, blood supply,  
plethysmography in diag. of sexual deviations)

EXCERPT MEDIC Sec 8 Vol 12/11 Neurology Nov 59

5890. THE PROBLEM OF THE TREATMENT OF HOMOSEXUALITY - Sobre el problema del tratamiento de la homosexualidad - Freund K. Clín. Psiquiat.. Karls-Univ., Prague - ACTA NEUROPSIQUIAT. ARGENT. 1958. 4/3 (233-247)

Tables 4

Between the cases of heterosexual adaptation which were observed after a non-exploratory, predominantly non-verbal psycho-therapeutic procedure, and those adaptations which have been reported by psychotherapists, there are no significant qualitative or quantitative differences. It is likely that all measures regarded as efficacious in cases of homosexuality are based on the same principle: a system of abstention from the homosexual habits in an atmosphere favouring heterosexual behaviour. The most that can be attained with psychotherapy is a change in the patient's social habits; his erotic orientation can be influenced only very slightly or not at all.

FREUND, K.

Three comments on the work of a psychopathologist. Cesk. Psychiat. 54  
no.3:177-183 June 58.

1. Vyzkumna laborator psychiatricko katedry KU v Praze.  
(PSYCHOPATHOLOGY,  
(Cz))

EXCERPTA MEDICA Sec 8 Vol 12/7 Neurology July 59

3372. REVIEWS ON THE VALIDITY AND RELIABILITY OF THE PHALLO-  
PLETHYSMOGRAPHIC (PHP)DIAGNOSIS OF SOME SEXUAL DEVIATIONS -

Fround K., Diamant J. and Pinkava V. Clin. of Psychiat.,

Charles' Univ., Prague - REV. CZECH. MED. 1958, 4/2 (145-151) Tables 4

The authors planned to test the validity and reliability of an objective method of  
diagnosing sexual deviations, by comparing the case histories with the Php tracings  
of the subjects, on exhibiting them the coloured, life-size, static, male and fe-  
male nude figures of age ranging from 4 to 30, for 13 sec. each with a gap of 10  
sec. in between.

Raychaudhuri - Calcutta

EXCERPTA MEDICA Sec 8 Vol 12/9 Neurology Sept 59

4774. SEDUCTION AS A CAUSE OF HOMOSEXUALITY - Zur Frage der Ver-  
fahrung zur Homosexualität - Freund K. and Pinkava V. Forsch.-  
Abt., Ambulanz für Sex. Deviationen, Psychiat. Klin., Karls-Univ., Prag -  
NERVENARZT. 1958, 29/8 (364-366) Graphs 2 Tables 4

The widely spread opinion that homosexuality is usually the result of seduction in  
youth was tested in 222 cases from the Prague Psychiatric Clinic. Those cases in  
which homo-erotic contact had been made with a man at least 5 yr. older were re-  
garded as being based on seduction. These conditions were present in only 13  
cases, which shows that seduction of children or juvenile persons is not a very

NEDOMA, Karel; FREUND, Kurt

The problem of responsibility and corrective measures in sexual delinquents. Cesk. Psychiat. 55 no.4:264-269 June 59.

1. Sexuologicky ustav KU v Psychiatricka klinika KUV Praze.  
(SEX DEVIATION)

FREUND, Kurt; PINKAVA, Vaclav

On the relationship between homosexuality and parental absences.  
Cesk. psychiat. 55 no.5:334-336 0 '59.

1. Psychiatricka klinika KU v Praze.  
(HOMOSEXUALITY)  
(PARENT CHILD RELATIONS )

FREUND, Kurt; PINKAVA, Vaclav

On the problem of age preference of male homosexuals. Cesk.psychiat. 55 no.6:362-367 D '59.

1. Psychiatricka klinika Karlovy university v Praze.  
(HOMOSEXUALITY)

FREUND, Kurt; PINKAVA, Vaclav

On the problem of "femininity" in male homosexuals. Cesk.psychiat.  
56 no.6:386-394 D '60.

1. Psychiatricka klinika KU v Praze.  
(HOMOSEXUALISM)

FREUND, K.

Laboratory differential diagnosis of homo- and heterosexuality -  
an experiment with faking. Rev.Czech.M. 7 no.1:20-31 ' 61.

1. Psychiatric Hospital Charles University, Prague. Director:  
Prof. V.Vondracek, M.D.  
(HOMOSEXUALITY diag)

FREUND, K.; PINKAVA, V.

Homosexuality in man and its association with parental relationships. Rev.Czech.M. 7 no.1:32-40 '61.

1. Psychiatric Hospital of Charles University, Prague. Director:  
Prof. MUDr. V. Vondracek.  
(HOMOSEXUALITY psychol)  
(PARENT CHILD RELATIONS)

NEDOMA, Karel; FREUND, Kurt

Somatosexual findings in homosexual males. Cesk. Psychiat. 57  
no.2:100-103 '61.

1. Sexualogicky ustav a psychiatricka klinika KU v Praze.  
(SOMATOTYPES) (HOMOSEXUALITY)

FREUND, Kurt

Femininity in the homosexual male and his parental relations.  
Cesk. psychiat. 57 no.3:170-174 '61.

1. Psychiatricka klinika KU v Praze,  
(HOMOSEXUALITY psychol.) (PARENT-CHILD RELATIONS)

FREUND, K.; NEDOMA, K.; PINKAVA, V.

2 types of picture of homosexuality in men. Cesk. Psychiat. 57 no.4:  
230-232 [redacted] 61.

1. Psychiatricka klinika a Sexuologicky ustav KU v Praze.  
(HOMOSEXUALITY)

FREUND, K.

CZECHOSLOVAKIA

Docent MD

Not Given

Prague, Prakticky Lekar, No. 18, 1962, p 813

"Fiftieth Anniversary of Docent MUDr Jiri Roubicek"

CZECHOSLOVAKIA

J. MADLAFOUSEK and K. FREUND, Psychiatry Research Institute (Vyzkumny ustav psychiatricky), Prague.

"Realistic Animal Models."

Prague, Ceskoslovenska Psychiatric, Vol 53, No 6, 1962; pp 369-371.

Abstract: Animal research has changed vastly since the end of the early post-war period, with much development in humoral, biochemical, social and stereotactic studies and experiments. These and future trends are discussed abstractly. No references.

CZECHOSLOVAKIA

K. FREUND, Psychiatry Research Institute (Vyzkumny ustav psychiatricky) Prague.

"Concluding Remarks."

Prague, Ceskoslovenska Psychiatric, Vol 53, No 6, 1962; pp 375-376.

Abstract: Discussion of the preceding three articles, all on various aspects of research in psychiatry. Extensive and intensive research in psychiatry each have their own set of rigid rules; experimental animal models must be predicated on conformity to known facts; new orientations in psychiatric research are, however, also needed.

FREUND, K.

Final considerations. Cesk. Psychiat. 58 no.6:375-376 D '62.

1. Vyzkumny ustav psychiatricky v Praze.  
(PSYCHIATRY)

FREUD, K., Psychiatry Research Institute (Vyzkumný ustav psychiatrický),  
Prague 8 - Bohnice.

"The Concept of Psychopathy"

Prague, Ceskoslovenska Psychiatrie, Vol LIX, No 4, August 63, pp 246-247.

Abstract: Using various references the author makes an attempt to define psychopathy. He argues a difference should be made between neurotic disturbances during development and psychopathies. Ten references, including 2 Russians.

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17

FREUND, K.

On the concept of psychopathy. Cesk. psychiat. 59 no.4:246-247  
Ag '63.

1. Vyzkumny ustav psychiatricky v Praze 8 ~ Bohnicich.  
(PSYCHOPATHOLOGY) (NOMENCLATURE)

FREUND, K.

On the problem of male homosexuality. Rev. Gen. Med. 17, no. 12  
11-17 '65

1. Psychiatric Research Institute, Vienna.

FREUND, K.

A simple device for measuring volume changes of the male genital organ. Cesk. Psychiat. 61 no.3:164-166 Je '65.

I. Vyzkumny ustav psychiatricky v Praze.

L 10726-66

ACC NR: AP6004563

SOURCE CODE: CZ/0083/65/000/003/0164/0168

AUTHOR: Freund, K.--Freynd, K. (Prague)

ORG: Psychiatric Research Institute, Prague (Vyzkumný ustav psychiatrický)

TITLE: Simple device for measuring volume changes of the penis

SOURCE: Ceskoslovenska psychiatrie, no. 3, 1965, 164-168

TOPIC TAGS: human physiology, medical laboratory instrument

ABSTRACT: A device allowing accurate measurements of volume changes of the male genital organ was designed by the author and used in erotic preference tests. Pictures are projected at 7 second intervals, and volume changes of the penis are automatically recorded. The range of the device is 0.035 to 8 cubic centimeters. Complete details of the construction of the apparatus are given. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: C07

PC  
Card 1/1

FREUD, L.

"A Bibliography Of The Anoplura Or Sucking Lice," p. 1. (Sborník  
Acta Entomologica. Vol. 16, No. 367, 1948-50, Praha.)

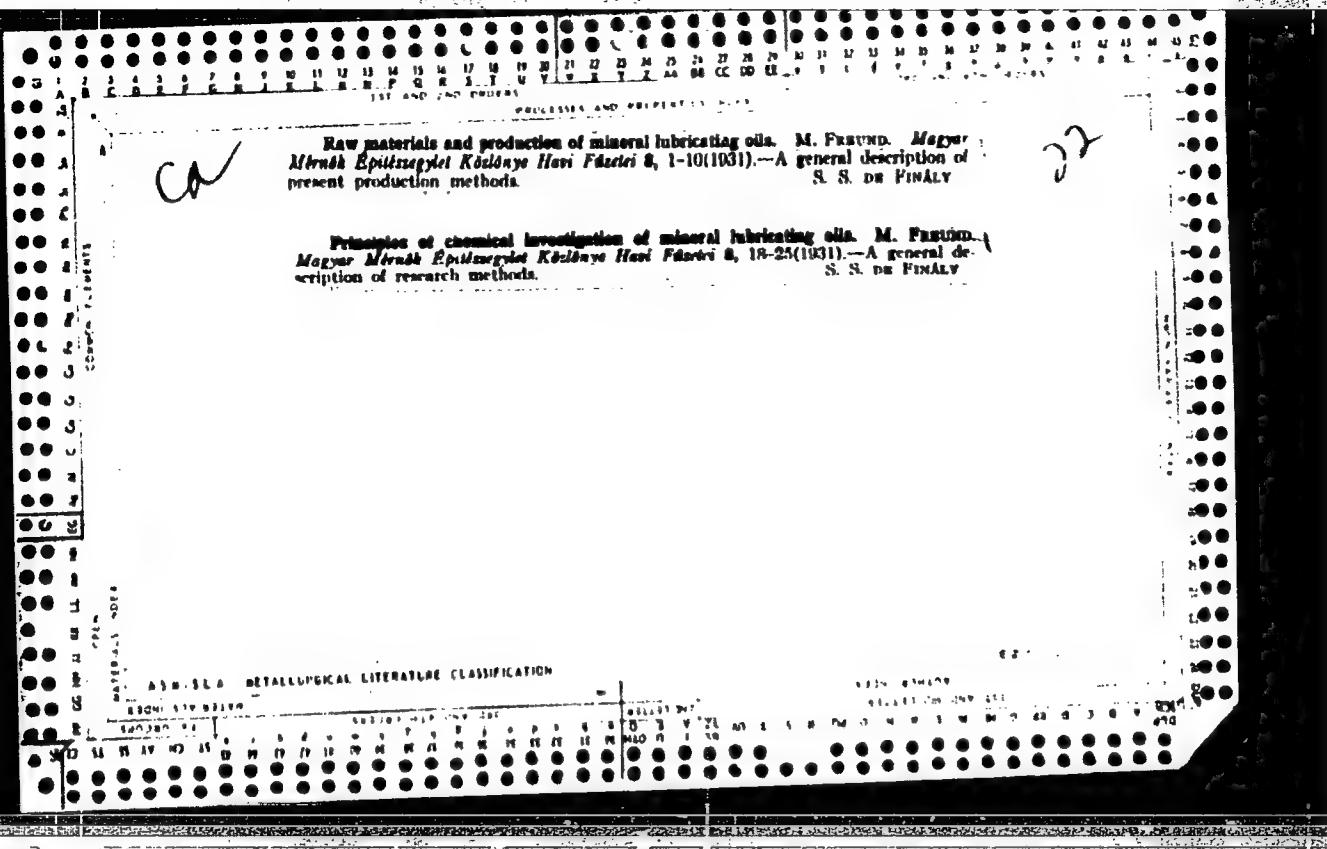
See: Monthly List of Best Books on Agriculture, Library of Congress, Washington, D.C.

FREUND, Ladislav, sanitetski potpukovnik, dr.; MADIRACA, Ante,  
sanitetski potpukovnik, dr.

Attempted therapy of dyspnea and asphyxia following acute  
edema of the larynx. Vojnosanit. pregl. 19 no.4:293-297  
Ap '62.

1. Medicinski centar ratne mornarice u Splitu, Odjel za bolesti  
uha, nosa i grla.  
(DYSPNEA) (ASPHYXIA) (LARYNGEAL EDEMA)

S



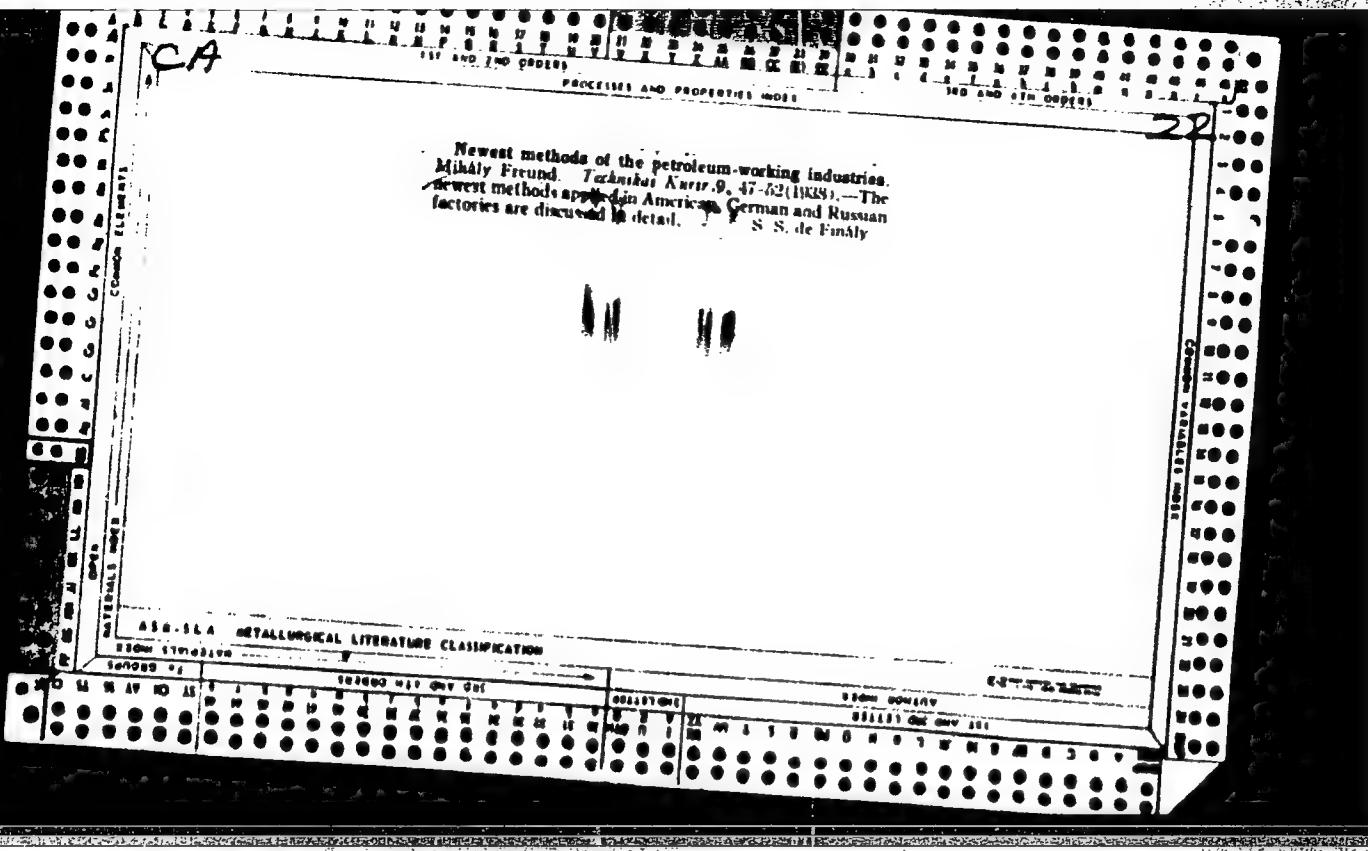
Lubricating oils. Mihaly Fenyud and Istvan Thann  
Hung. 117,002, Oct. 16, 1937. Fatty oils (e. g., olive,  
cottonseed) are blown with air to increase their viscosity,  
then mineral oils and 1-2% antioxidant are added. Di-  
benzyl- $\rho$ -aminophenol or  $\rho,\rho'$ -diaminodiphenylamine is a  
suitable antioxidant.

ASR-SEA METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION

RELEASE DATE

The characteristics of natural and artificial mineral lubricating oils with low specific gravities. Mihaly Freund. *Magyar Mérnök-Epítészeti Kedvese* 71, 356-0 (1971).—In comparing mineral lubricating oils of different origins and prep., or refined by different methods but having the same viscosity at 50° or other temp., the following regularities were obtained. The av. to pH, apparent acid, wt. and H content of the oils diminish with increase in sp. gr. The temp. viscosity curves however, become progressively more abrupt. These results could probably be applied to the evaluation of lubricating oils of the same viscosity. The data of the sp. gr. would be enough to draw some practical conclusions.  
S. S. de F.



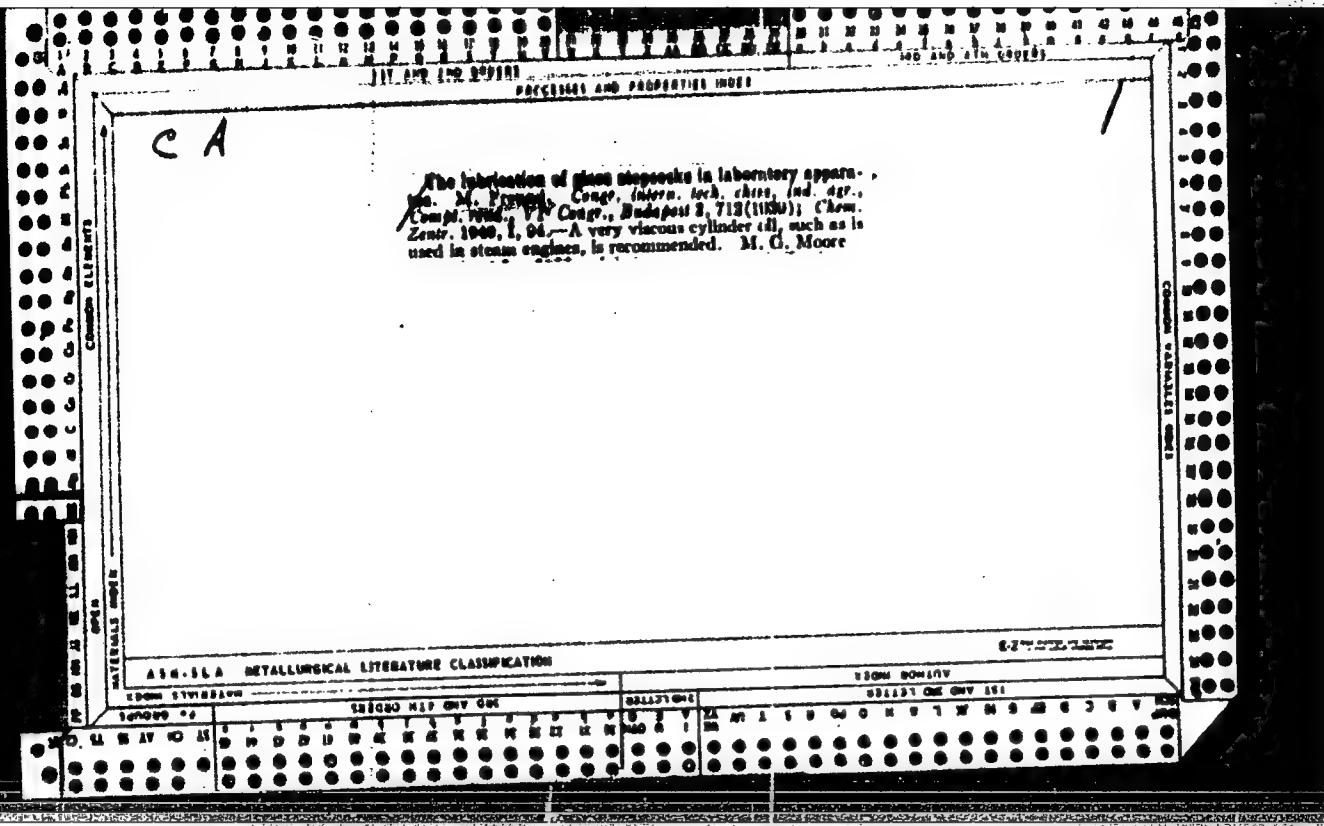
CA

22

## POLYESTER AND POLYPEROXIDE

The use and serviceability of mineral oil-vegetable oil mixtures as motor lubricants. Istvan Thann, M. Freund

and J. Nyul. *Congr. intern. tech. chim. ind. agric., Compt. rend., VII congr., Budapest 2, 315-46 (1939); Chem. Zentr. 1940, I, 4011.*—The characteristics which are demanded of a vegetable or a mixed lubricating oil for various purposes (lubrication of bearings, lubrication of internal combustion motors) and those which are to be expected of vegetable oils are discussed. Tests of viscosity, acid no., Conradson no., aging, etc., and tests in motor operation were made on rapeseed oil and castor oil and various mixes. of these oils with a series of mineral oils of varying compn., characteristics of which are reported. Neither of the vegetable oils can be satisfactorily used in the pure, unmixed condition. Mixes, contg. 30% vegetable oil could be used in motors with carburetors for limited periods of operation up to about 60 hrs. Use for longer periods is questionable. The residues left in the motor (volve, etc.) were different in kind and larger in amt. than those left by mineral oils. The residues produced by vegetable oils were hard and shiny and detrimental to the motor. Moreover, sepn. of the components of the oil mixts. was found to be possible, causes for such sepn. appeared to be in the operating conditions of the motor. When used as an admst. rapeseed oil appeared to be no less satisfactory than the mineral oil-oil, castor oils. Correctly chosen inhibitors should greatly increase the usefulness of the vegetable oils. Unexpectedly large differences were obtained with carburetor motors of different design. M. G. Moore



Stabilized vegetable oils in the lubrication of internal-combustion motors. Mihály Freund and István Thamm. *Májegy Mérnök- Építési- és Köröny 73*, 222-6 (1939). — In lab. oxidation tests, 12 samples were simultaneously treated in a specially constructed app. in oil bath heated to 200° with continuous mixing. For 5 hrs. O<sub>2</sub> was led through at the rate of 2 bubbles per sec. Rape oil was treated alone and with 0.5% of the following oxidation inhibitors: pyrogallol, 1,6-dihydroxynaphthalene,  $\alpha$ -ethoxyphenol,  $\alpha$ -aminophenol, dimethyl- $\rho$ -phenylenediamine, benzyl-aminophenol,  $\beta$ -hydroxyphenylmorpholine and dibenzyl-aminophenol. The rape oil before treatment had d. 0.911, 20°C. viscosity 4.37° E., acid no. 1.62 3.11, Conradson no. 0.32. After treatment the values were, resp., 0.917, 5.31-7.43, 3.11 5.33 and 0.54. Resinification was slight. The increase of acid no. is the most characteristic sign of oil oxidation. The acid no. increased much more in vegetable oils with inhibitors than in mineral oils; mineral oils, however, formed of sediments during oxidation while vegetable oils did not. In practical motor tests vegetable oils, especially rape oil without any inhibitors, increased in viscosity up to 34.0° E. and in acid no. up to 8.0. In presence of inhibitors these increases were to 12.2° E. and acid no. 4.16. A mixt. of 50% mineral oil and 50% rape oil in presence of inhibitor was satisfactory. The consumption of fuel and oil was the same as when mineral oil was used as lubricant.

S. S. de Finilly

CA

22

Compounding mineral oils, especially lubricating oils.  
Mihaly Gyurcs, Hung. 120,628, May 1, 1941. Polar  
components such as plant or animal oils, fats, oxidized,  
hydrated, polymerized products which can decrease the  
freezing point of the oils by 5  $^{\circ}\text{C}$  when added in  
amounts of 0.1-10.0% are added to the mineral oils. The  
addn. is best effected by dissolving the components in an  
aliquot portion of the mineral oil and then mixing this  
portion with the whole lot.

ATA-104 METALLURGICAL LITERATURE CLASSIFICATION

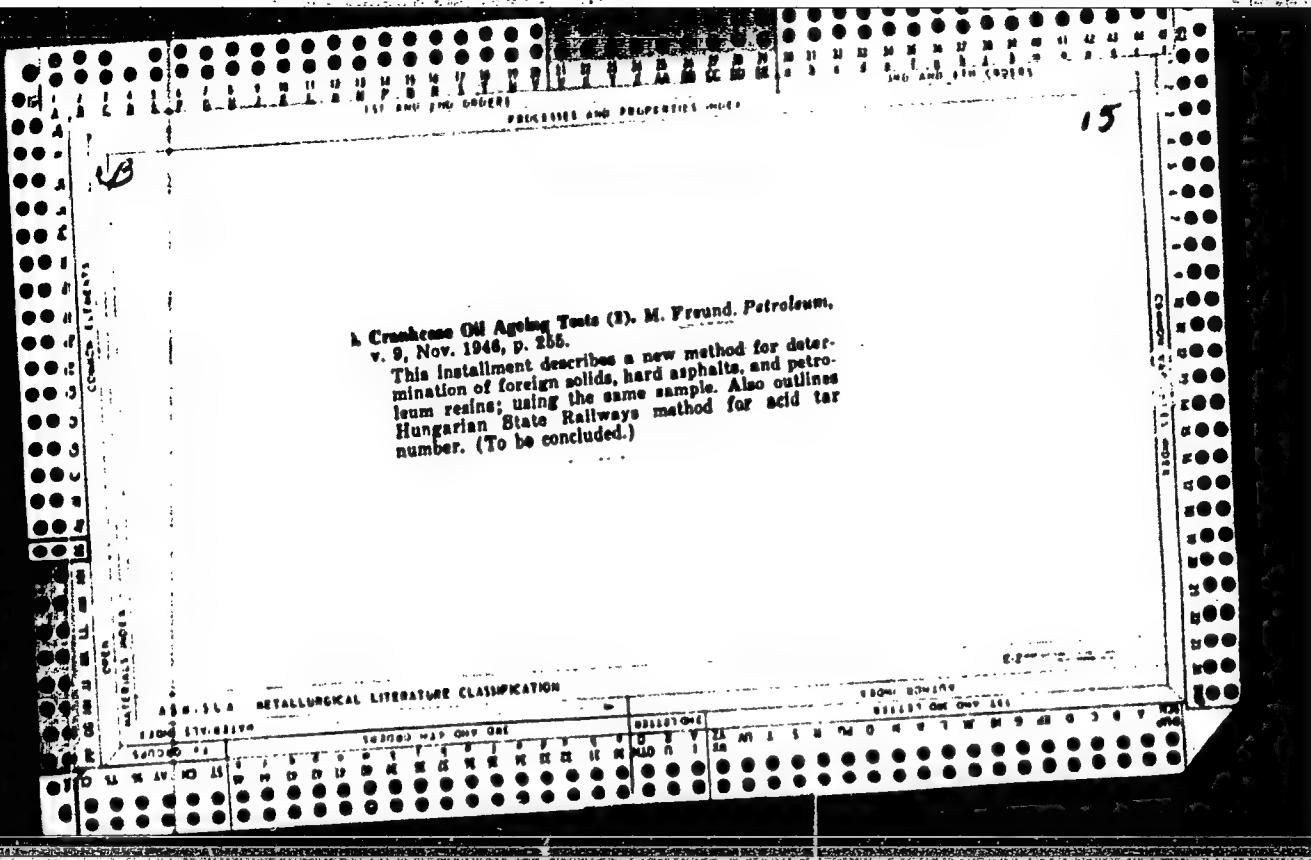
CA

22

Examination of lubricating oils by means of practical motor experiments. Mihaly Freund. *Magyar Tud.* 1, 20-4 (1946).—Expts. made with a high-speed Diesel motor showed that deterioration of lubricating oil can be detd. by deg. viscosity, acid no., content of dry asphalt, and change of content of solid matter. Special methods are worked out and recommended for the detn. of these characteristics. Viscosity, sp. gr., acid no., ash content, and content of components separable by HgS<sub>2</sub>, of solid asphalt, and of other solids increased with deterioration of the oil, or the time of operation of the motor. Variation of inflammation point showed no regularity. Istvan Finály

AS-338 METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION



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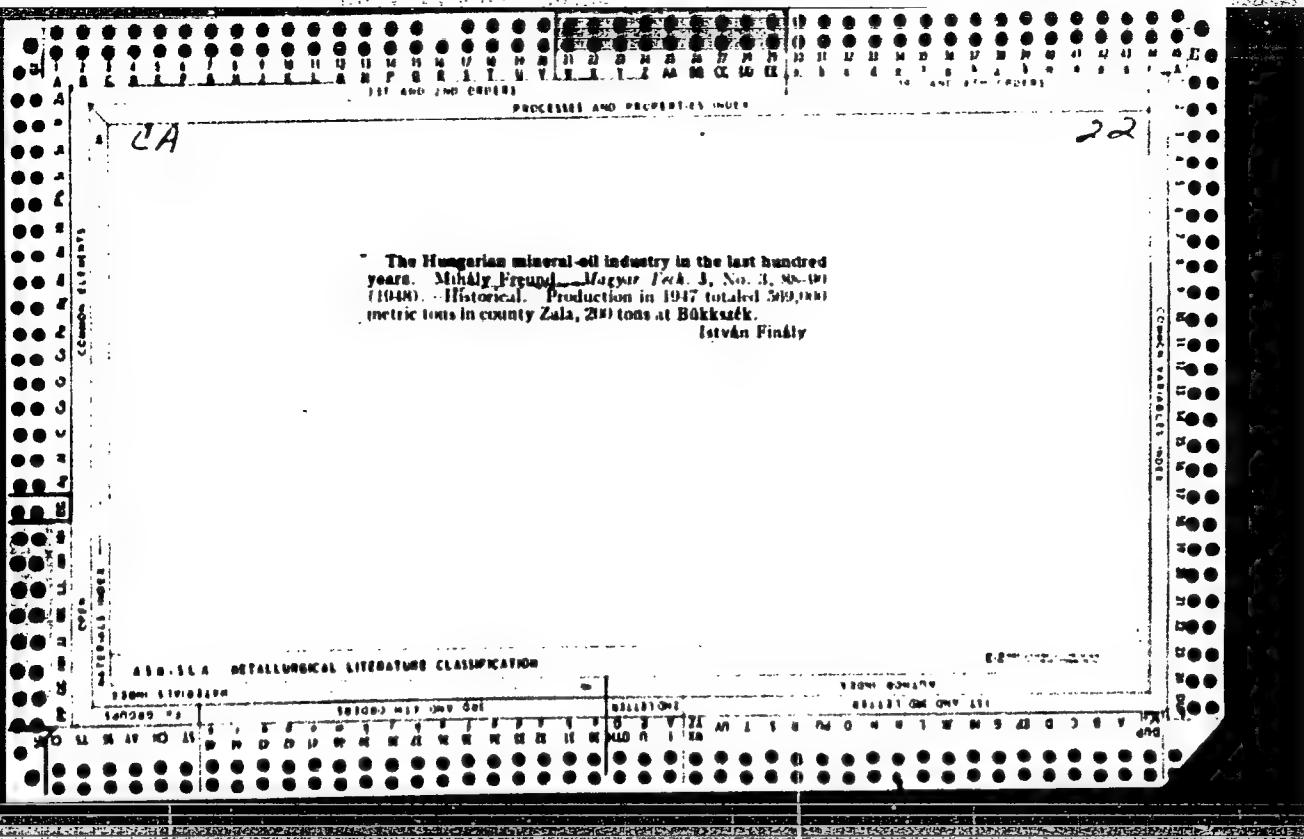
Application of liquid catalysts in the industry of mineral oils. Mihály Fenyves, Magyar Tech. J., No. 8, 70-81 (1954). General summary László Hidvér

**470 100 METALURGICAL LITERATURE CLASSIFICATION**

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**APPROVED FOR RELEASE: 06/13/2000**

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CA

22

on possible  
Determination of the adhesivity of mineral-oil lubricants. M. Freund (Petroleum Research Inst., Budapest). Magyarország Kölönnyé 1949, 15-28 in German). A reproducible centrifugal method and app. for detg. the adhesive properties of mineral-oil lubricants on solid surfaces are described. Metal plates were used in the studies. Under given conditions, and with increasing centrifuging time, the amt. of oil adhering to the surface and the thickness of the oil layer reach a limiting value which depends upon the surface properties of the metal and the viscosity of the oil, but is independent of the material of the plates and the chem. compn. of the oil. Fundamentally the detg. property of the oil is the no. of superimposed mol layers. The surface-tension properties do not play an important role in detg. the strength of the layers.

Felix Saunders

CA

22

The manufacture of synthetic lubricants by the Fischer-Tropsch and other processes. Mihály Kiss und Álványos Ipoly (a Pálházykutató Intézet, Budapest). Magyar Kémiai Lapja 5, MA 71(1951). A summary with 10 references.  
István Finály

c.4.

*Catalytic dehydrogenation of butane.* József Varga and Mihály Freundi (Univ. Tech. Sci., Budapest, Hung.) *Magyar Kém. Folyóirat* 50, 21-4 (1950). —An exptl. tube furnace was constructed from Cr steel with inner vol. of 1000 ml.; a spiral Cu tube served as the preheater. Both tubes were located vertically and heated by an elec. current to 625-75° (pre-heater), 800-850° (furnace). Butane sept. from Hungarian natural gas, consisting of butane 81.9, isobutane 15.6, and propane 0.5 vol. %, was introduced at the lower end of the vertical system. Various aunts. of a catalyst were used, with  $\text{Cr}_2\text{O}_3$  as the active substance and  $\gamma\text{-Al}_2\text{O}_3$  as the carrier. A medium amt. of catalyst gave the best results; the dehydrogenated gas after 45 min. treatment contained butylene and propylene 23.0, ethylene 0.8 vol. %.

István Finály

C.A.

22

Evaluation of lubricating oils for automobile motors. Mihaly Freund and Istvan Pallay (Research Inst. Mineral Oils Natl. GéM, Budapest). Magyar Kem. Folyóirat 50, 07 (1950). Lubricating oils of Hungarian, Russian, and American origin and blends obtained by mixing them were oxidized in the lab. by the Polish and British standard methods. Driving tests were also conducted with passenger cars by driving the cars for 2000 km., and investigating the quality of the oil. The results of the lab. tests were identical to those of the driving tests in relation to the properties affecting the condition of motors. A correlation was observed among percentage increase in solid substances (0.37-51%), Conradson no. (0.03-1.31), percentage increase of Conradson no. (0.08-61%) and oil consumption (0.30-0.4 kg.), higher nos. showed a deterioration in quality. In the evaluation of lubricating oils of identical viscosity, mol. wt., or av. b.p., a correlation of quality to d. was observed; increasing d. showed a deterioration in quality. I.F.

Adhesive properties of lubricating oils. Mihaly Freund (Research Inst. Mineral Oils Natl. GéM, Budapest). Magyar Kém. Folyóirat 50, 119-120 (1950). See C.I. 44, Mihaly Freund, Istvan Pallay

MACYAR TECHNIKA  
HUNGARIAN ENGINEERING  
1951  
No. 4 April

M. Freund:  
Utilization of tracking gases

ATA 51A METALLURGICAL LITERATURE CLASSIFICATION

Freund, M.

3. The formation of lubricating oil films on metal surfaces (In English) - M. Freund, Acta Chimica Academiae Scientiarum Hungaricorum Vol. 3, 1943, No. 1 pp. 1-11  
to figs.)

The phenomena of adhesion of oil films were studied on metal disks dipped into mineral lubricants and centrifuged at speeds of 5,000 to 30,000 rpm. Experimental data and microphotographs showed that after centrifuging at different speeds the structure and the thickness of the oil films forming in straight oil and in oil containing additives differ under certain conditions

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CIA-RDP86-00513R000413620014-0

"List of names in U.S. Mineral Oil Industry", U.S.A., (and other),  
Vol. 5, No. 10/11, Oct./Nov. 1975, Early '76, (Hungary)

(C: Monthly list of West European Accessories (W.E.A.), 10, Vol. 5, No. 5,  
June '76, U.S.A., 1976.)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620014-0"

*Freund, Mihaly*

New approaches to petroleum refining processes. I. Research on adsorption. Mihaly Freund (Hungarian Petroleum Natural Gas Research Institute). *Makromol Chem* 1953, 44, 117-125. In this paper the authors study the adsorption of hydrocarbons on charcoal.

Conclusions. Adsorption methods were invented to eliminate disadvantages connected with distillation. The proposed methods can be used to separate the immiscible and soluble fractions according to chemical properties of the components.

Conclusion. The rules governing adsorption are discussed and the effect of the adsorbent and the temperature on the regeneration of the chromatographic column.

Conclusion. It is shown that from any mixt. of heptane and isooctane, heptane can be separated by adsorption.

Conclusion. Hydrocarbon systems presents well-defined conen. ranges which are amenable to selective adsorption. From a gasoline-toluene mixt. contg. cyclohexane and heptane, the toluene is preferentially adsorbed at all concns. The need for theoretical consideration of the heats of adsorption and of selective adsorption is emphasized. III. Separation of aromatics from gasoline by adsorption. Ervin Kerényi. *Tud. Mű* 1953, 102. Two quant. methods were developed for the detn. of aromatic hydrocarbons in petroleum distillates. A micromethod consists in passing the sample through a short silica gel column and comparing n. of the original sample and of the first drop of the filtrate which is free from aromatic compds. In a macromethod a selective solvent having a large adsorptive capacity, such as EtOH, is used, and the fractions are identified by n. IV.

Manufacture of medicinal white oils through cyclic adsorption refining. Endre Vámos and Iván Hattyú Kovács. *Fürst. Pechl. u. Co. Ltd.* 1953, 10, 101-105. In order to reduce the cost of the production of medicinal white oil, the authors propose a method with ether as a reagent for the separation of the aromatic hydrocarbons from the mineral oil. The ether is added to the mineral oil and the aromatic hydrocarbons are adsorbed on charcoal.

Conclusion. The results show that the method is more effective than the conventional method of separation of aromatic hydrocarbons by crystallization.

Conclusion. The method is more effective than the conventional method of separation of aromatic hydrocarbons by crystallization.

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FREUND, M.

The processing of Negyiengyel crude oil, Milivoj

✓ asphalt 12, paraffin wax 4, S 3.5, and ash 0.03%, of which 0.01% is Mn. Virgin gasoline and kerosene fractions have S contents within specified limits. The kerosene contains most of the S present in asphalt. The kerosene can be converted products can be increased to 70% by increasing temperature and lowering pressures during distillation. The kerosene is used as fuel in specialized heating units.

Sulfur is lost in lighter fractions and can be recovered by distillation. The sulfur can also be recovered. Peter D. Mackay

- Freund, M.

HUNG

✓ 2034. FIFTH ANNIVERSARY OF FOUNDATION OF HUNGARIAN RESEARCH INSTITUTE  
FOR PETROLEUM AND NATURAL GAS. Freund, M. (Edg. Chas. Lap., 1954, vol. 9,  
(1), 3-5; cited in Ref. 21, 1954, Tech. J. Chem., Moscow), 1954, (13),  
282.

JM

HUNGARY/Chemical Technology - Chemical Products and Their  
Applications - Natural Gases and Petroleum  
Processing. Engine and Rocket Fuels, Lubricants.

H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37542  
Author : Freund, M.  
Inst :  
Title : Aging of Engine Greasing Oils.  
Orig Pub : Magyar tud. akad. kem. tud. oszt. közl. 1955, 6, No 12,  
          237-238  
  
Abstract : No abstract.

Card 1/1

FREUND, MICHAEL

Changes of motor oils during use. Michael Freund  
(Ugar, Trial-4, Erkasz, Pechungau, Budapest).  
Zell u. Akad. B., 712-1 (1953) -- Tests on a 4-cylinder  
Diesel engine showed that detergents improved the deposit  
testing but they also increased the sulphur content of the used  
oil. Soot was freed by dilution of the used oil with carbon  
acid, with HCl. The sludge consisted mainly of soot  
formed during combustion of the fuel. High S fuels give  
more engine deposits than fuels of low S content. Micro-  
graphs and electronmicrographs are presented to show the  
dispersion of soot in oil by detergent additives.

O. C. Elmer

JMB  
oab

FREUND, M.

HUNGARY/Organic Chemistry. Synthetic Organic  
Chemistry.

E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26912 K.

Author : Freund, Mihály; Bathory, Jozsef; Érdi, Niklos.  
Inst :

Title : Formation of Adducts with Urea. I. Preparation  
of Paraffin and Ceresin Under Laboratory and Semi-  
industrial Conditions.

Orig Pub: Budapest, 1955, 11, 114 1.

Abstract: No abstract.

Card 1/1

✓42. Rheologic properties of bitumens. M. Prendy,  
I. Vajta. Magyar Kémiai Folyóirat, Vol. 67,  
No. 9, pp. 277-282, 12 figs., 1 tab.

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The rheologic properties of different kinds of domestic bitumens were investigated as a function of the shear velocity and temperature by means of a Höppler type consistometer. Other properties of the domestic bitumen produced by different processes were investigated at the same time (e. g. ageing phenomena, etc.) and the degree of complex flow was determined. It was found that the bitumen originating from Matzen and produced by distillation processes is a pure viscous sol-type modification containing some well-peptized particles in the investigated temperature range of 20 to 90 °C. The bitumen originating from Nagylengel may be considered as a sol-type bitumen bordering on the gel state in the investigated temperature range. By increasing the distillation temperature these products are converted with moderate velocity to a gel-type structure whereas blowing accelerates this conversion more definitely.

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